

## REPORT DOCUMENTATION PAGE

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14. ABSTRACT The NOSB is an academic competition to engage students in ocean science as part of an enhanced STEM education. The NOSB consists, annually, of 25 regional competitions and one National Finals Competition. In 2014, 329 teams (approximately 1,645 students) from 34 states and the District of Columbia participated in the regional competitions. Funding provided by this award supported staff planning and team participation in the 2014 National Finals Competition. The Finals were held May 1-4, 2014 in Seattle, WA with a theme of ocean acidification. A longitudinal study and annual surveys demonstrate program impact.					
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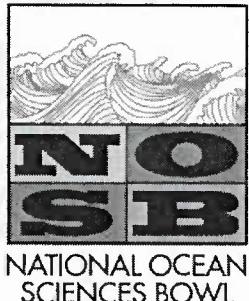
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March 30, 2015

Dear Sir or Madam,

Please find enclosed the final technical report on the FY14 National Ocean Sciences Bowl award (N00014-14-1-0193), along with our SF-298 and statistics files.

A copy has also been provided to our technical representative, Joan S. Cleveland, Office of Naval Research, 875 North Randolph Street, Arlington, VA 22203-1995.

Sincerely,

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## **National Ocean Sciences Bowl in 2014: A National Competition for High School Ocean Science Education**

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<http://www.nosb.org>

### **LONG-TERM GOALS**

- Cultivate environments that develop knowledgeable ocean stewards who understand the ocean's impact on daily life and the importance of current scientific research;
- Foster the use of the ocean as an interdisciplinary vehicle to teach science and mathematics and encourage the inclusion of the ocean sciences in curriculum;
- Reach out to and support the involvement of underrepresented and geographically diverse communities in the ocean sciences; and
- Provide students interactive education that develops critical thinking and skills for the workforce and exposes them to ocean science professionals and career opportunities.

### **OBJECTIVES**

- Implement 22 highly interactive, engaging competitions around the country that will reach approximately 1,900 students per year and involve over 1,200 professional science volunteers.
- Coordinate a series of webinars during September-December 2013 that will train 22 Regional Coordinators and discuss best practices on how to attract, engage and retain teams and volunteers.
- Hold the 2014 Finals Competition involving 22 student teams (of 4-5 students each) and 100 professional science volunteers and incorporate interactive regionally-based field trips within Seattle, Washington.
- Enhance the Ocean Sciences Quiz, an online game that is available to lifelong learners who want to gain more knowledge about ocean sciences and NOSB teams who wish to practice their skills for the competition, by encouraging NOSB participants to submit questions.
- Provide educational award trips to nationally winning teams, allowing them to gain hands-on experience with ocean scientists.
- Develop and review nearly 2,500 science questions that touch on all ocean science disciplines (biology, chemistry, physics, geology, marine policy, social science and technology) and compile the questions into three competitions.
- Offer online professional development training to educators across the country on the program's theme and incorporate questions from the presentations into the competitions.
- Continue to implement a longitudinal study on program alumni and their higher education and career paths.
- Support and promote the 22 regional sites that will host the regional 2014 NOSB competitions.

- Incorporate a career event at the NOSB Finals and assist many of the regional competitions that will involve ocean science professionals.
- Circulate more broadly at the regional competition level NOSB's career booklet to help guide students selecting their ideal career and provide them with guidance on how best to take appropriate next steps.
- Actively encourage students from diverse communities to participate in NOSB activities.

## APPROACH

The National Ocean Sciences Bowl® (NOSB®) is a nationally recognized high school academic competition. The NOSB provides a forum for talented students to excel in science and math and introduces team members, their teacher/coaches, schools and communities to ocean sciences as an interdisciplinary field of study and a possible future career path and stimulates broad interest in and excitement about science and the ocean. The overall program operates within a supportive ocean science learning community framework that involves the NOSB national office, managed by the Consortium for Ocean Leadership, 25 regional competition hosts in the research community in pre-college education and approximately 1,200 volunteers per year.

Please note that for a number of reasons, including but not limited to a reduction in federal support to the NOSB for the 2013-2014 operating year, only 22 of our 25 regional competitions were held. More information is provided under Regional Competitions in the Work Completed section.

The NOSB national office: coordinates the development of the competition questions; trains the Regional Coordinators (RCs); manages the competition rules; coordinates and manages the Science Expert Briefing; plans and implements the National Finals Competition, in conjunction with the regional host institution; manages the NOSB communications; organizes the program's evaluation and longitudinal study; and manages the enhancement activities such as the scholarship program for NOSB participants graduating high school and pursuing ocean sciences in college, a professional development series for coaches, a video contest open to any high school students and the online quiz game that simulates the NOSB buzzer rounds.

The regional hosts (see Appendix I; 22 of 25 held competitions in 2014) implement their individual competitions each February and/or March on one of two provided dates. Each host site has at least one designated staff member who serves as the primary coordinator. The RCs are trained by NOSB staff on how to organize and administer a regional competition, but are given flexibility to arrange events that are regionally unique. Some regional competitions include mandatory projects, a poster session, participation in a lecture series, or other activities. Regional hosts are responsible for recruiting at least eight teams from eight different schools and 50-100 volunteers as competition officials to ensure their competition rooms run smoothly. They are also expected to coordinate speakers, presenters and activities for non-competing students during their regional competitions.

The overall coordination and partnership between the NOSB staff, the RCs and the volunteers each year ensure the successful engagement of as many as 2,000 students in ocean science education and STEM career exploration.

## WORK COMPLETED

Some of the work described below was completed outside of this award and/or its period of performance (prior to January 2014), but is highlighted in this report as the culmination of all the tasks completed is critical to the overall success of the NOSB program.

Question Development: Competition questions, received from six hired question writers and numerous volunteers, were edited for scientific accuracy and level of difficulty by ocean science professionals, graduate students and educators during the Technical Advisory Panels (held September - October 2013). The NOSB staff then sorted the questions into rounds for each competition date. The panels, through accepting, revising and rejecting questions, narrowed down the question pool to approximately 2,255 high quality buzzer questions and 90 TCQs for use in the 2014 regionals and National Finals Competition. Question development and review is supported by leveraged funds from The National Aeronautics and Space Administration (NASA), but remains an almost year round activity for the national office.

Regional Competitions: Budget cuts and an Administration proposal to reorganize STEM programs within the federal agencies led to a loss of NOSB's core support from NOAA, or about 60% of the NOSB's funding, in late 2013. Although a very generous donation from Eric and Wendy Schmidt ensured the program would continue for the 2013-2014 academic program year, the NOSB still faced a shortfall. In addition to cuts in staff, the NOSB national office had to reduce the subsidy to each regional host site (Appendix I) to \$5,000 for the 2013-2014 competition cycle to cover many of the costs associated with implementing the regional bowls. Historically, each region received a \$13,000-\$15,000 subsidy.

The 2014 regional competitions likewise looked for ways to cut costs and raise additional funds, such as charging teams a registration fee or limiting the number of pre- and post-bowl activities. Three regional competitions were canceled: given the budget shortfall and below average regional competitions subsidies, the Aloha Bowl at the University of Hawaii Manoa was unable to host their competition; due to the intense September 2013 flooding in Colorado, the Trout Bowl (held at the University of Colorado Boulder) was unable to secure a venue; and lastly, San Francisco State University noted it was no longer able to host the Sea Lion Bowl (not due to reduced funding, but staffing issues) and was therefore canceled for 2014. The national office, with assistance from a few of the other regional competition hosts, was able to relocate 10 Sea Lion Bowl teams in order for them to compete in 2014; four to the Salmon Bowl at Oregon State University in Corvallis, OR and six to the Los Angeles Surf Bowl at the Jet Propulsion Laboratory in Pasadena, CA. These bowls were provided extra funding to cover the costs of absorbing additional teams. One Trout Bowl team was relocated to the Loggerhead Challenge at the University of Texas Marine Science Institute in Port Aransas, TX as the coach and students were willing to cover their own extensive travel costs.

The 2014 regional competitions took place on February 1, 2014 and March 1, 2014 (with an inclement weather date of March 8 and the Los Angeles Surf Bowl occurring March 15 due to a logistical and venue challenge). Overall, in 2014, 329 teams (approximately 1,645 students) from 34 states and the District of Columbia participated in the regional competitions.

National Finals Competition: The NOSB culminated, as it does each year, with the National Finals Competition. The top team from each of the 22 regional competitions that took place in 2014 competed for nation-wide recognition at our 17th annual NOSB National Finals Competition. Finals were hosted

by the NOSB national office and the Orca Bowl at Washington Sea Grant and the University of Washington (UW) in Seattle, WA on May 1-4, 2014. The theme for the 2014 Finals Competition was ocean acidification, exploring the progressive increase in ocean acidity caused by excess carbon dioxide in the atmosphere and its ramifications on marine ecosystems and organisms, as well as the role that humans play in the process. The students were immersed accordingly in a career event, field trips, presentations and questions that highlight the causes and environmental and societal effects of ocean acidification. They became more aware of ocean acidification's potential to disrupt ecosystems in a way that endangers the ocean and its role as a food source, storm buffer, and more. The theme was particularly relevant for the National Finals Competition in Seattle, Washington, as the U.S. Pacific Northwest has already been seeing the direct effects of ocean acidification, especially on its shellfish industry. UW stepped up to the challenge and became an example for the nation in coordinating research and monitoring of ocean acidification and its effects on local oysters, clams and fish.

The National Finals Competition began Thursday evening with an engaging speed-career search event. The students were given the opportunity to meet with 15 professionals, ask questions about their career paths and receive advice on college and career aspirations and goals. The following individuals served as the career mentors:

- Eddie Allison, UW School of Marine and Environmental Affairs
- Merrick Burden, Marine Conservation Alliance
- Lieutenant Commander Gregg Casad, U.S. Coast Guard's Thirteenth District
- Kassandra Cerveny, Consortium for Ocean Leadership
- Mike Chang, UW School of Marine and Environmental Affairs
- Christina Durham, National Oceanic and Atmospheric Administration National Marine Fisheries Service
- Andrea Fassbender, UW School of Oceanography
- Christen Foehring, UW Marine Biology Academic Adviser
- David George Gordon, Science Writer
- Pete Granger, Washington Sea Grant
- Trevor Harrison, UW Department of Mechanical Engineering
- Meg Matthews, Sierra Club
- LT Matt O'Leary, National Oceanic and Atmospheric Administration Corps
- Sarah Towne, National Oceanic and Atmospheric Administration Fisheries

On Friday, the students and coaches took part in numerous, interactive field trips around the Seattle area, including: a water sampling cruise with the Ocean Inquiry Project on Puget Sound; an exploration of the Mercer Slough Nature Park; a water pollution patrol with the Puget Soundkeeper Alliance; a tour of NOAA's Western Regional Center laboratories; a tour of NOAA's Fisheries Research Station; a guided low-tide beach walk; kayaking and sailing; zip-line tours; and guided tours of Seattle landmarks. The students ended their day of field trips with a tour of the Seattle Aquarium and an inspirational presentation from Dr. Brian Baird, President of Antioch University Seattle and former member of the U.S. House of Representatives.

The competition rounds officially began on Saturday, with teams also participating in the Science Expert Briefing (SEB), the NOSB's critical thinking and workforce skill development activity that mimics a congressional hearing. The topic for the 2014 SEB highlighted the theme of ocean acidification as the students were required to address the scientific requirements in the reauthorization

of the Federal Ocean Acidification Research and Monitoring (FORAM) Act. The SEB included two key elements:

- A written document (Science Briefing Report) that was written and submitted to the national NOSB office prior to the Finals Competition; and
- An oral presentation (Expert Testimony) that the teams gave to a panel of judges during the competition on Saturday.

Saturday activities also included a presentation by Matthew Huelsenbeck, Team Relations Manager for the Wendy Schmidt Ocean Health XPRIZE and university tours for teams no longer in competition, including tours of the Argo Float lab, the Coastal Observation and Seabird Survey Team lab, the UW Fish Collection repository facility, the Molecular Ecology Research lab and the Wetland Ecosystem Team lab.

After a suspenseful final round on Sunday, the top three teams at the Finals Competition were:

- 1st Place – Boise High School, Boise, ID;
- 2nd Place – Arcadia High School, Arcadia, CA; and
- 3rd Place – Juneau-Douglas High School, Juneau, AK.
- Scientific Expert Briefing winner – Bishop Sullivan Catholic High School, Virginia Beach, VA.
- James D. Watkins Sportsmanship Award winner – Langham Creek High School of Houston, TX.

The NOSB's sportsmanship award was named after Admiral Watkins, a U.S. navy admiral and former Chief of Naval Operations, due to his role in founding the NOSB in 1997. It was because of his commitment to science education and with his vision and leadership that the NOSB became an important mechanism to promote the ocean sciences and improve science literacy in the U.S.

More information about the 2014 National Finals Competition is available at <http://nosb.org/compete/competitions/finals-competition/2014-nosb-finals/>.

Enhancement Activities: The NOSB is more than just a buzzer competition. Since 2007, the NOSB has continued to heighten coaches' and students' experiences at the regional competitions, National Finals competition and throughout the school year. The NOSB national office provides additional enhancements to the competitions, including: scholarships for NOSB participants; professional development opportunities for NOSB coaches; a video contest tied to the Ocean Literacy Principals; career events; interactive field and award trips; the SEB, our mock congressional briefing; an online game; and enhanced communication of other marine and freshwater opportunities available to high school students and teachers. All of the enhancement activities have a similar objective – to expose students and educators to ocean science information, activities, presentations and interactions with scientists in ways that they do not receive in the traditional classroom setting. These opportunities are extremely important and influential as they provide interactive and hands-on learning opportunities that help shape personal, leadership and professional development skills. The additional enhancement activities described below, although supported by leveraged funds from other federal agencies, remain integral pieces to the overall NOSB program.

The NOSB hosted its annual Professional Development Webinar Series from December 11, 2013 through January 28, 2014 on the year's theme of ocean acidification. The series provided teachers,

both NOSB coaches and other educators, with the opportunity to enhance their knowledge of issues related to the global carbon cycle and the natural and anthropogenic sources of carbon to the ocean, as well as the effects of ocean acidification on marine organisms. The seminar's guest experts also provided questions for the 2014 NOSB competitions.

- Dr. Amy Maas, Woods Hole Oceanographic Institution, presented on ocean acidification and its impact on pteropods
- Dr. Nina Bednarsek, National Oceanic and Atmospheric Administration's Pacific Marine Environmental Laboratory, compared different systems around the globe in terms of the future of pteropods, with a focus on carbonate chemistry

All webinar recordings can be viewed at <http://nosb.org/learn/professional-development/professional-development-archive/professional-development-201314-series/>.

The NOSB, in partnership with the National Marine Educators Association (NMEA), sponsored the 2014 "Living on the Ocean Planet" video contest. Any students enrolled in high school were eligible to submit a 1-3 minute video. All 12 entries were excellent, but the National winner was "Ocean Acidification" by Chelsea Aure, Tommy Fenton, and Tom Ertle of Marine Academy of Technology and Environmental Science (NJ). Through creative storytelling and visualization, "Ocean Acidification" addressed human actions that increase carbon dioxide and explains the carbon dioxide cycle and the effects of ocean acidification on marine ecosystems in a fun and engaging way. The Fan Favorite winner was "The Human Element" by Joshua Weinberg, Mitchell Cairns and William Bates of Marine Academy of Technology and Environmental Science (NJ), which also took second place in the National competition. The winning video, as well as all submissions can be viewed at <https://www.youtube.com/user/theNOSB/videos>.

The NOSB, in partnership with MIT Sea Grant, created the Ocean Sciences Quiz (OSQ), an online game, to simulate the buzzer portion of an NOSB competition. Individual players can either compete against the clock; compete against another player using the same computer; or compete another player across the internet. We remain extremely excited about the OSQ as an addition to the NOSB program, not only because more people will be able to experience the NOSB, but because, by design, the program can be an excellent learning tool. Although any student or adult can help expand the game's question database, the national office uploads additional questions to the game's database, making it as robust and attractive as possible. This summer, with support from the National Oceanic and Atmospheric Administration, we plan to hire additional question writers to add another 200-300 questions to the game, helping to make it a more robust system for students to use when preparing for their regional competitions. The game is available online at [www.nosb.org/osq](http://www.nosb.org/osq).

## RESULTS

Regional Competitions: The 2014 regional competitions highlighted how important students and educators around the U.S. find participating in the NOSB and how the program impacts the participants academically, socially and personally. Overall, all 22 of the 2014 regional competitions went smoothly and we received the following comments from the regional surveys:

- *"First and foremost, I really enjoy competing, regardless if I won or lost. It was really fun meeting other students from schools, I thought it was really well organized, and very fun to attend."*
- *"I liked the diversity of schools that participated and the range of the questions in both topic and difficulty levels. I also appreciated the sportsmanship of all the competitors."*

- “I liked the way the competitions were organized so that every team had the chance to compete with a variety of schools of all levels.”
- “The officials and players were friendly and encouraging. The atmosphere was welcoming and competitive, and my team and I had the opportunity to meet members of several other teams who we greatly enjoyed talking to.”
- “So far, I like competing. I came into this so afraid that we were going to be demolished by the competition, but this has honestly been a self-esteem boost for me. Maybe I won’t be so pessimistic anymore.”

National Finals Competition: After the 2014 National Finals Competition in Seattle, WA, it was clear from survey comments of students and coaches that many of the students in attendance gained a greater sense of self confidence, both in the knowledge of ocean sciences and their ability to answer difficult questions.

- “I learned that I have much more capabilities than I thought because I answered questions faster than I thought I ever could, and I knew so much for the competition even though I wasn’t a hard-core studier.”
- “[The NOSB benefits students by] building “confidence” and a deep seated “love” for all things “OCEAN”! After a successful year, my kids are already pushing to start practicing in unique ways for NEXT YEAR!”
- “I had an extremely SHY student, as well, who has blossomed in knowledge, confidence and personal relationships as a result of this Regional and National experience. Her new-found confidence is palpable when I see her in the halls now! She can’t get enough Ocean Books to devour now.”
- “Of all of the experiences and memories I made while in Seattle, perhaps the most memorable will be those shared with students from other teams. Before arriving, I couldn’t fathom just how inspiring and motivated other teams would be. In addition, I don’t think I will quickly forget my own teams’ personal victories and mental breakthroughs gained through competition; these gains will most definitely serve my teammates and I well throughout the rest of our lives.”

Through the career event, the field trips and meeting volunteers who are professionals in the ocean science community, students grasped a better understanding of their possible career options and learned just how many individuals are working in ocean-related jobs.

- “[I learned] there are careers in oceanography available to people that do not come directly from a marine science background.”
- “I learned that an immense number of people care about the oceans and that I can make a difference and have a career in the future.”
- “There are so many things that I learned at NOSB Finals that it is hard to pick a single one. However, one does stand out from my field trip. While touring the NOAA labs, I gained a much more in depth knowledge of Multibeam and Sidescan techniques from the group that produces nautical charts.”

Lastly, coaches remarked on how the NOSB motivates their students to learn about ocean sciences, highlighting that the learning outside of the traditional classroom really emphasizes the interdisciplinary nature of ocean science:

- “Without the NOSB competition, members of my team would not have the motivation to learn about the ocean sciences. They see that ocean sciences cover a wide range of sciences and even non-science areas such as policy and history. They also are beginning to understand the

*interplay between areas of science, something that is rarely taught. To be an effective scientist, you must bridge the gaps between traditionally separate silos, such as bio, chemistry, physics, geology and math and non-science silos such as government, and the public. This ability to bridge is an important skill for any technical person, not just in the ocean sciences.”*

- “NOSB opened up the world of science to my students. In our area, students with an aptitude in science go into medicine or technology. Period. It was great to see so many scientists who worked in environmental sciences, ocean sciences, engineering, NOAA, seafood safety, military, etc.
- “[The NOSB] teaches [students] different types of learning. They see the basic vocabulary, but also learn to "research" topics, delve deeper. This is an essential skill for researchers. It also links book knowledge with hands on "real stuff" in a wonderful way.”
- “Participation in the NOSB encouraged the team to learn outside the traditional science subjects and to see the interdisciplinary nature of ocean sciences. As a coach I had to learn how to teach material.”
- “The NOSB competition is extremely valuable to our students and school. [Our school] is a very small school that does not offer an oceanography or marine science course. This competition allows interested students to study this discipline and interact with other students who have similar interests.”

Communication: Ocean Leadership, worked closely with the RCs and NOSB staff to ensure that each regional competition and the National Finals received media coverage. The total media circulation (unique visitors) for 2014 was 53,731,481.

The NOSB staff continued to promote the program through the use of social media. We used our Facebook site to highlight ocean acidification study resources, as well as share team and regional competition media stories from the regional competitions. The Facebook was used at the National Finals Competition in Seattle to ensure family and friends back home can stayed up to date on the progress of their favorite competing team.

## **IMPACT/APPLICATIONS**

To evaluate the long-term impact of the NOSB, the program has conducted, in partnership with the College of Exploration and Ashland University, a Longitudinal Study since 2007. Funding from ONR supported the 2014 Past Participant Longitudinal Study survey and report and a special study survey and report on Instructional Choices and Team Preparation.

### *2014 Past Participant Report*

Fifty past participants (32 undergraduates and 18 in graduate school), from a database of approximately 250 individuals, provided responses to the yearly participant tracking survey. Thirty-four percent indicated that their career will include an emphasis on marine, aquatic or ocean sciences. When asked if their NOSB preparation and competition activities benefited them in their college career, 96% responded yes, noting specifically that they gained increased knowledge content, enhanced study and self-discipline skills, greater abilities to communicate in public and heightened career interest and awareness. When asked why they loved learning about marine science in high school, college or graduate school, the responses included the attraction to exploration, new discoveries, the constant supply of new information, problem solving and being challenged. The

survey results show that the NOSB past participants represent a growing network of professionals with commitments to science and ocean science, who are willing to devote long hours of study and work to satisfy their intellectual curiosity.

#### *Instructional Choices and Team Preparation Report*

For the Instructional Choices and Team Preparation report, two surveys were developed to look at instructional strategies and team preparation: one for the team coaches, i.e. secondary school teachers; and a second survey for students who participated in the two most recent years' competitions. These surveys were particularly focused on the instructional methods used by coaches in their classrooms or in out-of-school activities to prepare the teams for the regional and/or national competitions.

A total of 81 classroom teachers who coach an NOSB school team provided responses to the survey. Some findings included:

- Nearly 80% of the coach respondents noted that they used web pages from federal agencies, such as ONR, as instructional resources to prepare their teams. These sites, textbooks and questions banks developed by the teams filled out the top three resources.
- For 46% of respondents (35), the students on the NOSB team were members of a larger science or ocean science club organization. For 26% of the respondents (22) the students were exclusively on the NOSB team as a stand-alone entity. An additional 17% of respondents (14) represent NOSB teams that also competed in other academic and science competitions beyond the NOSB program. 11% (9) of respondents taught an ocean content science course from which the NOSB team emerged during the year.
- The coach respondents collectively delineated 3,654 individual students received ocean science content instruction because of the NOSB team preparation activities, to include high school classes that covered the content. This is an average of nearly 46 students per teacher, far beyond the number of students on the NOSB team itself.

A total of 33 students responded.

- 97% of student respondents placed first at least once at their regional competition.
- Thirty of the respondents indicated that they either are or are planning to pursue a degree in a STEM related field.
- 40% are taking or took an ocean science related course in high school, which would have directly related to preparation for the NOSB competition.
- For the high school graduates, 21% have taken or are taking a college course related to ocean science, which, while not related to NOSB preparation, may be related to other outcomes of the NOSB program or student career interest.

When asked numerous questions, all related to the benefits to their students from participating in the NOSB competition, the coaches responded with comments on how NOSB encouraged behavioral change, enhanced ocean science learning, and motivated students to pursue ocean science and STEM careers:

- “Some of the top science students in our school have commented that they didn’t really “get it” about how everything is so co-dependent, until putting it all together through their work and studying with the NOSB team”
- “Without our participation in the NOSB, the students would have almost no exposure to ocean sciences.”

- “We have dramatically increased the number of students graduating from our school who intend to major in environmental science, marine science or geology.”
- “This is really a life-changer for students. In my seven years coaching I’ve seen students latch on to the NOSB and literally take a different course in their education. I’ve had kids go to MIT, Princeton, Cal Tech, Stanford, and other top schools who may not have done so without NOSB as their shining star, and certainly without as much interest in the environment. I’ve worked with Science Olympiad, Science Fair, Mars Rover Teams, Flying Clubs, and others, and NOSB has had the strongest overall impact of any program I’ve encountered as a secondary science teacher.”

Overall, the continued Longitudinal Study emphasizes that the NOSB is more than an academic competition. The NOSB is a community of multiple stakeholder groups – students, educators, scientists, federal agencies, and sponsors - who all benefit from the interactions with one another through question development, competition preparation and participation, and other enhancement activities. The 2014 Longitudinal Study and instructional practices reports can be found online at <http://nosb.org/impact/program-evaluation/>.

## **RELATED PROJECTS**

NONE

## APPENDIX I

Regional NOSB bowl names, regional coordinator(s) and host institutions for the 2014 competitions included:

- Aloha Bowl (Hawaii) – this bowl was not held in 2014
- Bay Scallop Bowl (New York) – Dr. Bill Wise and Kim Knolls, Stony Brook University
- Blue Crab Bowl (Virginia) – Dr. Carol Hopper Brill, Virginia Institute of Marine Science at the College of William and Mary and Dr. Victoria Hill, Old Dominion University
- Blue Heron Bowl (North Carolina) – Janelle Fleming, North Carolina State University
- Blue Lobster Bowl (Massachusetts) - Judith Pederson, Massachusetts Institute of Technology Sea Grant College Program
- Chesapeake Bay Bowl (DC, Maryland, Northern Virginia & Delaware) – Christopher Petrone - University of Delaware
- Dolphin Challenge (Galveston, Texas) – Terrie Looney, Texas A&M University – Galveston and Texas Sea Grant
- Great Lakes Bowl (Michigan) – Kevin Keeler and Whitney Conard, University of Michigan and Michigan Sea Grant
- Grunion Bowl (Southern California) – Kristen Evans, Birch Aquarium, Scripps Institution of Oceanography, University of California San Diego
- Hurricane Bowl (Central Gulf Coast) – Beth Jones, Gulf Coast Research Laboratory, University of Southern Mississippi
- Lake Sturgeon Bowl (Wisconsin) – Elizabeth Sutton, University of Wisconsin, Milwaukee, School of Continuing Education
- Loggerhead Challenge (Corpus Christi, Texas) – Terrie Looney, Texas Sea Grant – held at the University of Texas Marine Science Institute
- Los Angeles Surf Bowl (Los Angeles, California) – Kimberly Lievense, Jet Propulsion Laboratory
- Manatee Bowl (South Florida) – Dennis Hanisak, Florida Atlantic University's Harbor Branch Oceanographic Institution
- Nor'easter Bowl (Northern New England) – Mark Wiley, University of New Hampshire
- Orca Bowl (Washington) – Maile Sullivan, University of Washington-College of Ocean & Fishery Sciences
- Penguin Bowl (Ohio & Pennsylvania) – Dr. Ray Beiersdorfer, Youngstown State University and Margie Marks, Pittsburgh Zoo & PPG Aquarium
- Quahog Bowl (Rhode Island & Connecticut) – Diane Payne and Thaxter Tewksbury, University of Connecticut at Avery Point, Connecticut Sea Grant Program and Project Oceanology
- Salmon Bowl (Oregon) – Saskia Madlener, Oregon State University, College of Oceanic and Atmospheric Sciences Conservation Biology Institute
- Sea Lion Bowl (San Francisco Bay Area, California) – this bowl was not held in 2014
- Shore Bowl (New Jersey) – Carrie Ferraro, Rutgers, The State University of New Jersey, Institute of Marine and Coastal Sciences
- Southern Stingray Bowl (South Carolina & Georgia) – Dr. Dionne Hoskins and Victoria Young, Savannah State University
- Spoonbill Bowl (West Florida) – Dr. Teresa Greely, University of South Florida, School of Marine Sciences
- Trout Bowl (Colorado & Central States) – this bowl was not held in 2014

- Tsunami Bowl (Alaska) – Phyllis Shoemaker, University of Alaska Fairbanks, Alaska Sealife Center

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[title]National Ocean Sciences Bowl in 2014:A national competition for high school ocean sciences education  
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[bestAccomplishment]The NOSB Finals Competition was held in Seattle, WA in May 2014. The competition was hosted by the local Orca Bowl at the University of Washington. The theme for the year was ocean acidification.  
[comments]